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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/636,153

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Robert W. Allington

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03/21/2006

STURM & FIX LLP

206 SIXTH AVENUE

SUITE 1213

DES MOINES, IA 50309-4076

EXAMINER

LUDLOW, JAN M

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/636,153

Applicant(s)

ALLINGTON, ROBERT W.

Examiner

Jan M. Ludlow

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/7/03, 8/30/04</u> . | 6) <input type="checkbox"/> Other: ____. |

1. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what additional limitation is intended by claim 19 because formation of a chromatogram is recited in claim 16.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-4, 6, 8, 12-15, 21-23, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassard (US006103533A).

Hassard (US006103533A) teaches method and apparatus for measuring peaks of separated materials in a tube (col. 4, lines 60-63), such as an electrophoresis tube. A plurality of detectors are arranged along a flow path and signals S(t) are measured at each detector over time (Fig. 10, cols. 11-12). The signals are grouped in velocity

Art Unit: 1743

space and integrated to produce peaks (col. 5, lines 28-61, especially line 56).

Collection and handling of data results in reduced noise (col. 12, lines 43-46). Marker compounds can be used to determine velocity, which is related to the time required to reach the position of a given sensor (col. 6, lines 3-20). With respect to the “second plurality” of detectors, the plurality of detectors of Hassard constitutes the instant first and second pluralities. The method may also be used for a HPLC system (col. 8, line 62).

Hassard fails to explicitly teach forming a chromatogram.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the detection method of Hassard in an HPLC system to produce a chromatogram in order to use the method in an application explicitly taught by Hassard. With respect to “selection” of the sensors, all the sensors are selected at the measuring times.

4. Claims 5, 7, 9-11, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Hassard as applied to claims above, and further in view of Kumar.

Hassard fails to teach using the solvent spike as a marker of velocity.

Kumar teaches that velocity in a chromatography column is related to the time required for the solvent peak to emerge from the system (col. 6, lines 39-51).

It would have been obvious to use the solvent peak as an absorbance marker in the method of Hassard in order to use a known velocity marker as taught by Kumar.

5. Claims 16-19, 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullan US005099129A in view of Nakanishi US006042708A .

Pullan teaches a method and apparatus for detecting radiation. Effluent from an electrophoresis or chromatography column can be passed into a groove, the flow stopped when desired components are in the groove and measurements taken at plural detection sites formed in apertures above the groove. Signals can be processed, including using time delays. After measurement, the flow may be restarted, or the groove flushed out before another sample is taken. Additional conventional detectors may be provided. (See, e.g., col. 2, lines 1-15, col. 3, lines 35-45, col. col. 7, line 33-col. 8, line 10).

Pullan fails to teach integration or summation.

Nakanishi teaches a detector similar to that of Pullan. Flow is stopped in an electrophoresis channel, and multiple measurements taken over time using photocells. The measured values are "accumulated" (col. 3, lines 10-20,. col. 4, lines 34-40, col. 6, lines 46-52, Figures 2, 5-7). With respect to the solvent spike, it would have been obvious to stop flow based on any desired component detection.

It would have been obvious to accumulate (which the examiner reads as summation and/or integration) the signals of Pullan in order to reduce signal to noise as taught by Nakanishi.

6. Claims 16-20, 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi US006042708A in view of Pullan US005099129A.

Nakanishi teaches a detector apparatus and method of use. Flow is stopped in an electrophoresis channel when the last target component has been separated, and multiple measurements taken over time using photocells. The measured values are

Art Unit: 1743

“accumulated” (col. 3, lines 10-20, col. 4, lines 34-40, col. 6, lines 46-52, Figures 2, 5-7).

Nakanishi fails to teach generating a chromatogram.

Pullan teaches that stop flow detection methods can be used in either chromatography or electrophoresis.

It would have been obvious to apply the method and apparatus of Nakanishi to a chromatography column in order to analyze an alternative separation to electrophoresis as taught by Pullan. With respect to the solvent spike, it would have been obvious to stop flow based on any desired component detection.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 16-20, 29-33 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of

Art Unit: 1743

copending Application No. 10/801409. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the instant claims are found in the narrower claims of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 1 and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 24-25 of copending Application No. 10410373. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claim 1 differs from claims 1-2 of the co-pending application by recitation of summing and statistical correlation as part of a Markush group and reciting generation of a chromatogram, and it would have been obvious to generate a chromatogram from data in a chromatographic system. Instant claim 21 differs from claims 24-25 of the co-pending application by reciting a calculation unit for summing or statistically correlating, which is an obvious means for summing or correlating as in the co-pending claims.

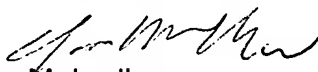
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow
Primary Examiner
Art Unit 1743

Jml
March 19, 2006